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10/774,633	02/10/2004	Hiroaki Maehara	118611	9481

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EXAMINER

LAI, ANNE VIET NGU

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/774,633

Applicant(s)

MAEHARA, HIROAKI

Examiner

Anne V. Lai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/29/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 12 and 13 are objected to because of the following informalities: The claim label identifier is incorrect: The identifier "(Currently)" should be changed to "(Currently Amended)". Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1-5, 17-20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ries-Mueller** [US. 6,856,044] in view of **Matsubara** [US. 5,155,467] or **Haruna** [US. 2002/0003472, US. 6,639,511] (or Haruna in view of Hasegawa [JP. 2002-067882, US. 2002/0039951] as from the report of the Patent office of Republic of China provided by the applicant, NPL of 3/29/06) and further in view of **Yamashita** [US. 6,615,122].

In claims 1 and 24, **Ries-Mueller** discloses an anti-theft apparatus comprising a plurality of acceleration sensors mounted on a vehicle for providing acceleration parameters to the vehicle electronic control unit in normal operating mode to control suspension, stability and safety of the vehicle, and further discloses the same sensors can be evaluated in antitheft mode for theft detection (abstract; col. 1, line 47- col. 2, line 4; claims 1-7; with suspension control in col. 1, l. 51-61, and stability control in col.

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1, l. 66- col. 2, l. 4). **Matsuhara** (col. 1, line 61-col. 2, line 10) (or **Haruna**, abstract) teaches setting the acceleration sensor for sensing theft of automobile at higher sensitivity than in normal vehicle operation for qualification of resolution; and **Yamashita** teaches the acceleration sensors in the vehicle also includes acceleration sensors for front and side collision airbags (figs. 3-4, and related specification). In view of the teaching of Matsuhara or Haruna, it would have been obvious to any ordinary skill in the art, the sensors of Ries-Mueller should be switch to higher sensitivity in antitheft mode, and low sensitivity at normal operation to avoid erroneously conclude theft the detected vibration of the vehicle in normal operation; and although Ries-Mueller is brief in naming the plurality of acceleration sensors it would have been obvious the acceleration sensors in normal operation including sensors providing data for operating front/side airbags could be used as designer choice for providing data to the anti-theft device for reason of accuracy and reliability.

In claims 2 and 5, Ries-Mueller combined discloses switching the sensitivity of a plurality of acceleration detection units when it receives the anti-theft instruction (Matsuhara, col. 1, line 61-col. 2, line 10; or Haruna, abstract); and the theft judgment is based on respective detection result of the plurality of acceleration detection units (Ries-Mueller; inclination, acceleration sensors; col. 1, line 47- col. 2, line 4; col. 4, line 38-50).

In claim 3, it would have been obvious for an ordinary skill in the art, in theft mode, any sensed acceleration exceeded the sensitivity threshold of the switch would be judged as theft activity and the sensitivity threshold is based on designer choice to obtain a reliable detection result (Matsubara, col. 1, l. 61- col. 2, l. 10).

In claim 4, it would have been obvious for an ordinary skill in the art; theft activity could be confirmed if plural acceleration sensors in the same direction exceeded threshold value based on designer set up (Ries-Mueller, col. 2, l. 58- col. 3, l. 3; Matsubara, col. 3, l. 4-9).

In claim 17-18, Ries-Mueller combined discloses a vehicle state-monitoring unit for monitoring state of the vehicle including monitoring an on/off state of an ignition key and sensing out antitheft instruction accordingly (Ries-Mueller, operating-state detection 28; col. 3, lines 7-31).

In claim 19, Ries-Mueller combined discloses an antitheft method comprising acceleration detection step, sensitivity switching step at antitheft instruction, and theft judgment step (Ries-Mueller, col. 1, l. 47- col. 2, l. 4; Matsubara, col. 1, l. 61-68; Haruna, abstract); wherein the acceleration detection unit comprises a plurality of acceleration sensors used in normal vehicle operation control. Ries-Mueller discloses stability and suspension sensors (Ries-Mueller, col. 1, l. 47- col. 2, l. 4, see office action above) and Yamashita discloses acceleration sensors for front and side airbags (figs. 3-4 and related specifications). It would have been obvious to an ordinary skill in the art; the selection of acceleration sensors for antitheft mode from the plurality of sensors used for normal vehicle operation mode is based on designer choice to obtain reliable theft detection result.

In claim 20, Ries-Mueller combined discloses a microcontroller to control the operation of the antitheft apparatus (14, figs. 1-2) therefore computer-executed program is inherent.

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4. Claims 6-11 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ries-Mueller combined** in view of **Hasegawa** [US. 2002/0039951].

In claim 6, Ries-Mueller and Matsubara combined omits vibration sensing; Hasegawa teaches vibration and inclination sensors are elements of acceleration sensor of an antitheft apparatus (64, fig. 2; abstract). It would have been obvious combined plural sensors types increases the accuracy of the sensing device.

In claim 7, Ries-Mueller figure 2 shows speed sensors 42 and 48, and Yamashita figure 3 shows acceleration sensors 1-5 at the outer edge of the vehicle; and these sensors can be used in antitheft mode as disclosed by Ries-Mueller; therefore detection result of these sensors in antitheft mode can determine whether or not the vehicle is in theft state.

In claim 8, although the different in sensitivity of the sensors are not disclosed, however when the vehicle is being jacked in one side (e.g., tire theft), it would have been obvious the travel distance of the outer part at that side is longer than the travel distance of the center part of the vehicle therefore the sensitivity of the sensor at the central must be set higher than the one at outer part to provide accuracy to the sensing operation; and setting the sensitivity of the sensor is not an innovation, it has always been practiced by designer or user to provide reliable detection result.

In claim 10-11, Hasegawa teaches a filter circuit for eliminating noise from the detection result of the acceleration detection unit (40 in fig. 2; [0099]; Matsubara, col. 2, l. 65-68). Since the sensors are switched to high sensitivity in antitheft mode (Matsubara, col. 1, l. 61- col. 2, l. 10; Haruna, abstract), it would have been obvious the

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cutoff frequency of the noise filter would also be switched for accuracy and reliability of the detection result.

In claim 14, Hasegawa teaches a battery supplying power to an ECU containing the acceleration detection unit; and the acceleration detection unit includes a power control unit for controlling the power supply only to the acceleration detection unit for detecting the theft state (figs. 12a-12b; [0104]-[0110]).

In claim 15, Matsubara teaches intermittent supply power to the sensor to reduce power dissipation (S3, figs. 10-12; col. 6, line 66- col. 7, line 53).

5. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ries-Mueller combined** above with or without in view of **Van Wechel** [US. 6,452,961].

In claims 12-13, Yamashita teaches the extracting of detected acceleration signal from noise by integrating or filtering the signal (col. 6, l. 57-61, and col. 12, l. 37-44).

Van Wechel teaches periodic integration of a signal to eliminating noise in digital data signal processing (col. 6, l. 66 –col. 7, l. 16). It would have been obvious to one of ordinary skill in the art at the time the invention was made; eliminating noise by filtering or periodic integrating a detected signal is well known; and implementing this feature to Ries-Mueller combined provides additional noise resistance to the acceleration sensor.

6. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Ries-Muller combined** in view of **Okada** [US. 6,816,081].

In claim 16, Ries-Mueller combined does not specifically disclose stop supply power when battery is low in voltage; Okada teaches using a switch halting supply power to a detector when battery is low in voltage to minimizing drainage of the battery

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(fig. 19; col. 15, lines 12-45); It would have been obvious stop supplying power when the battery is low in voltage avoid battery drainage, therefore saving a battery life.

Response to Arguments

7. Applicant's arguments filed 9 March 2006 have been fully considered but they are not persuasive.

a) In response to Applicant's argument with respect to claim 9 that the Office Action fails to point to any disclosure in either Reis-Muller, Matsubara or Hasegawa to support a conclusion that the data obtained from acceleration and yaw sensors used in an antitheft device would also be used to control the suspension and stability of the vehicle. The examiner disagrees. Reis-Mueller in col. 1, l. 66 – col. 2, l. 4, and col. 4, l. 44-49 clearly states sensors for stability control (electronic stability program, ESP) can be used for theft detection; and in col. 1, l. 51- 63 discloses sensors used in operation suspension control can be used for theft detection. The word "suspension" may not being mentioned however it is well known sensors for weight detection and inclination detection on the shock absorber for control regulation of the chassis are obvious for suspension control as explained in the cited reference of **Takeda** [US. 5,382,045] (col. 6, l. 64-67; the suspension control system includes a vehicle height sensor, a vertical acceleration sensor, and an ECU) where inclination sensor is part of an acceleration sensor by Hasegawa (see office action above).

b) In response to Applicant's argument with respect to claim 12 and 13 reference to Script filing date. The reference to Script is withdrawn and replaced by the reference of Yamashita or Van Wechel (see office action above).

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c) In response to Applicant's argument with respect to claim 16, the rejection to amended claim 1 (combination of previous claims 1 and 9) is maintained as explained in the office action above, therefore the rejection to claim 16 is maintained.

d) In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne V. Lai whose telephone number is 571-272-2974. The examiner can normally be reached on 9:00 am to 6:30 pm, Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hofsass Jeffery can be reached on 571-272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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